

(a) comprises seven canonical framework cysteine residues,

(b) has at least 75% sequence identity with SEQ ID NO:221 or SEQ ID NO:223, and

(c) promotes survival of mesencephalic neuronal cells.

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15. (Amended) The isolated and purified nucleic acid molecule or nucleic acid molecule complementary thereto of claim 14 [comprising a nucleic acid sequence encoding a persephin polypeptide that promotes survival in mesencephalic cells] wherein [said nucleic acid molecule] the nucleotide sequence or the fragment of said nucleotide sequence or complement thereto specifically hybridizes to SEQ ID NO:183, SEQ ID NO:184, SEQ ID NO:194, SEQ ID NO:195, SEQ ID NO:199, SEQ ID NO:200, SEQ ID NO:201, or SEQ ID NO:202.

13
17. (Amended) A vector comprising expression regulatory elements operably linked to [a] the nucleic acid molecule, the nucleic acid molecule complementary thereto, or the fragment of claim

15
19. (Amended) An isolated and purified nucleic acid molecule comprising:
(a) a pre-pro persephin nucleotide sequence as set forth in SEQ ID NO:179, SEQ ID NO:180, SEQ ID NO:190, SEQ ID NO:191, SEQ ID NO:203, SEQ ID NO:204, SEQ ID NO:205, or SEQ ID NO:206 or a polynucleotide that specifically hybridizes to SEQ ID NO:179, SEQ ID NO:180, SEQ ID NO:190, SEQ ID NO:191, SEQ ID NO:203, SEQ ID NO:204, SEQ ID NO:205, or SEQ ID NO:206;

(b) a pre-pro region of a persephin polynucleotide as set forth in SEQ ID NO:181, SEQ ID NO:182, SEQ ID NO:192, SEQ ID NO:193, SEQ ID NO:213, SEQ ID NO:214, SEQ ID NO:215, or SEQ ID NO:216;

(c) a pre- region of a persephin polynucleotide as set forth in SEQ ID NO:207, SEQ ID NO:208, SEQ ID NO:209, or SEQ ID NO:210;

(d) a pro- region of a persephin polynucleotide as set forth in SEQ ID NO:211, or SEQ ID NO:212; or

(e) a fragment thereof comprising at least 15 [contiguous] nucleotides.

Please add the following new claims:

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22. (New) The isolated and purified nucleic acid molecule or nucleic acid molecule complementary thereto of claim 15, wherein the persephin polypeptide comprises SEQ ID NO:223 or a conservatively substituted variant thereof.

²⁹
33. (New) The isolated and purified nucleic acid molecule or nucleic acid molecule complementary thereto of claim ¹⁴14, wherein the persephin polypeptide consists of SEQ ID NO:221 or a conservatively substituted variant thereof.

³⁰
34. (New) The isolated and purified nucleic acid molecule or nucleic acid molecule complementary thereto of claim ³⁸32, which specifically hybridizes to SEQ ID NO:183, SEQ ID NO:194, SEQ ID NO:199, or SEQ ID NO:201.

³¹
35. (New) An oligonucleotide comprising at least 15 nucleotides which specifically hybridizes to the nucleic acid molecule or nucleic acid molecule complementary thereto of claim ¹⁵16.

³²
36. (New) The oligonucleotide of claim ³¹35 comprising at least 30 nucleotides.

³³
37. (New) An oligonucleotide comprising at least 15 nucleotides of the nucleic acid molecule of nucleic acid molecule complementary thereto of claim ¹²16.

³⁴
38. (New) A non-naturally occurring nucleic acid molecule or nucleic acid molecule complementary thereto comprising a nucleotide sequence encoding a polypeptide or a fragment of the nucleotide sequence consisting of at least 15 nucleotides, wherein the polypeptide

- ³⁵
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- (a) comprises seven canonical framework cysteine residues,
 - (b) has at least 75% sequence identity with SEQ ID NO:221 or SEQ ID NO:223, and
 - (c) promotes survival of mesencephalic neuronal cells.

³⁶
39. (New) A vector comprising expression regulatory elements operably linked to the nucleic acid molecule, the nucleic acid molecule complementary thereto, or the fragment of claim ³⁴38.

³⁷
40. (New) A cell which produces the non-naturally occurring nucleic acid molecule or nucleic acid molecule complementary thereto or fragment of claim ³⁴38.

³⁸
41. (New) The nucleic acid molecule or nucleic acid molecule complementary thereto or fragment of claim ³⁴38, which specifically hybridizes to SEQ ID NO:183, SEQ ID NO:184, SEQ ID NO:194, SEQ ID NO:195, SEQ ID NO:199, SEQ ID NO:200, SEQ ID NO:201, or SEQ ID NO:202.